

Statement of Basis - Narrative NSR Permit

Type of Permit Action: Regular-Significant Revision

Facility: Wildcat Compressor Station
Company: XTO Energy, Inc.
Permit No(s): 7474-M2
Tempo/IDEA ID No.: 38056 - PRN20200001
Permit Writer: Melinda Owens

Fee Tracking

Tracking	NSR tracking entries completed: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	NSR tracking page attached to front cover of permit folder: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	Paid Invoice Attached: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	Balance Due Invoice Attached: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	Invoice Comments: Balance paid in full 8/3/2020	

Permit Review	Date to Enforcement: NA (not currently reviewing permits)	Date of Enforcement Reply: NA
	Date to Applicant: 7/31/20	Date of Applicant Reply: 8/20/2020
	Date to EPA: N/A	Date of EPA Reply: N/A
	Date to Supervisor: 1/22/21	

1.0 Plant Process Description: The function of the facility is to separate oil, natural gas, and water from a nearby pipeline; temporarily store condensate onsite until it is removed via truck or pipeline; and compress dehydrated natural gas for transport through the sales line.

2.0 Description of this Modification: This Significant Revision includes the following:

- Revision of engines emission rates to include: a) NOx emissions increase to include a 25% safety factor, b) decreasing the emission factor for fuel sulfur from 5 gr/100 scf to 3.8 gr/100 scf, c) revise catalyst control efficiency of VOCs to 73%.
- Remove heaters HTR2 and HTR3;
- Remove engines ENG10 and ENG13;
- Increase glycol circulation rate from 6.8 to 27.6 gallons per minute;
- Increase dehydrator capacity from 70 MMScfd to 80 MMScfd;
- Decrease glycol regenerator reboiler (RB1-RB3) unit heat input from 3 MMBtu/hr to 2.0 MMBtu/hr;
- Adding 2 VRUs for low pressure separator;
- Increase flare purge gas rates;
- Increase condensate tank throughput from 8,263,500 gal/yr to 10,062,406 gal/yr;
- Decrease produced water tanks from 6,610,603 gal/yr to 6,589,924 gal/yr;
- Decrease truck loading from 8,197,518 gal/yr to 3,490,657gal/yr;

- Rename 2 units to SKT1 & SKT2 (previously GB-1a/GB-1b) that will be controlled by the flares;
- Increasing steady state flaring that's associated with increased tank throughput and glycol circulation rate;
- Adding Malfunction VOC venting emissions;
- Adding SSM flaring;
- Update flare height to 145'.

3.0 **Source Determination:**

1. The emission sources evaluated include the entire Wildcat Compressor Station, both existing equipment and modifications included in this action.

2. Single Source Analysis:

A. SIC Code: Do the facilities belong to the same industrial grouping (i.e., same two-digit SIC code grouping, or support activity)? **Yes**

B. Common Ownership or Control: Are the facilities under common ownership or control? **Yes**

C. Contiguous or Adjacent: Are the facilities located on one or more contiguous or adjacent properties? **Yes**

3. Is the source, as described in the application, the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes? **Yes**

4.0 **PSD Applicability:**

A. The source, as determined in 3.0 above, is a minor source before and after this modification.

5.0 **History (In descending chronological order, showing NSR and TV):** *The asterisk denotes the current active NSR and Title V permits that have not been superseded.

Permit Number	Issue Date	Action Type	Description of Action (Changes)
7474-M2	2/11/2022	Significant Revision	Revision of emission factors, removal & addition of some equipment, increase of tank throughput and steady state flaring. See detailed information on the previous page.
7474-M1	2/6/2019	Significant Revision	This revision included an increase in gas throughput and replaced many of the engines previously permitted. Additionally, the dehydration systems were modified, the VRU and VRT removed, a low-pressure separator (LPS) added, and a Caterpillar 3306 TA (203 hp) added.
*7474	1/03/18	NSR - New	Initial issuance

6.0 **Public Response/Concerns:** Comments were received from WildEarth Guardians requesting a Public Hearing on August 3, 2020. A hearing request was submitted to the Secretary and held October 25, 2021. The Hearing Officer issued a recommendation on December 27, 2021. On February 10, 2022 the Deputy Cabinet Secretary granted the issuance of the permit.

7.0 Compliance Testing: Initial compliance tests were performed on ENG1, ENG2, ENG3, ENG11, and ENG12 between March 24 and March 26, 2020.

8.0 Startup and Shutdown:

- A. If applicable, did the applicant indicate that a startup, shutdown, and emergency operational plan was developed in accordance with 20.2.70.300.D(5)(g) NMAC? **NA**
- B. If applicable, did the applicant indicate that a malfunction, startup, or shutdown operational plan was developed in accordance with 20.2.72.203.A.5 NMAC? **Yes**
- C. Did the applicant indicate that a startup, shutdown, and scheduled maintenance plan was developed and implemented in accordance with 20.2.7.14.A and B NMAC? **Yes**
- D. Does the facility have emissions due to routine or predictable startup, shutdown, and maintenance? **Yes**. If so, have all emissions from startup, shutdown, and scheduled maintenance operations been permitted? **Yes**

9.0 Compliance and Enforcement Status: No response was ever received from my 7/1/20 email sent to Enforcement.

10.0 Modeling: In her 8/20/2020 modeling report, Angela Raso stated:

“This modeling analysis demonstrates that operation of the facility described in this report neither causes nor contributes to any exceedances of applicable air quality standards. The standards relevant at this facility are NAAQS for CO, NO₂, PM_{2.5}, PM₁₀, and SO₂; NMAAQs for CO, NO₂, and SO₂; and Class I and Class II PSD increments for NO₂, PM₁₀, PM_{2.5}, and SO₂.”

11.0 State Regulatory Analysis (NMAC/AQCR):

STATE REGU- LATIONS CITATION 20 NMAC	Title	Applies (Y/N)	Unit(s) or Facility	JUSTIFICATION:
2.1	GENERAL PROVISIONS	Yes	Entire Facility	The facility is subject to Title 20 Environmental Protection Chapter 2 Air Quality of the New Mexico Administrative Code so is subject to Part 1 General Provisions, Update to Section 116 of regulation for Significant figures & rounding. Applicable with no permitting requirements.
2.3	Ambient Air Quality Standards	Yes	Entire Facility	NSR: 20.2.3 NMAC is a SIP approved regulation that limits the maximum allowable concentration of Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide.

STATE REGU- LATIONS CITATION 20 NMAC	Title	Applies (Y/N)	Unit(s) or Facility	JUSTIFICATION:
2.7	Excess Emissions	Yes	Entire Facility	Applies to all facilities' sources.
2.38	Hydrocarbon Storage Facilities	Yes	OT1-4	<p><u>20.2.38</u> NMAC This regulation could apply to storage tanks at petroleum production facilities, processing facilities, tanks batteries, or hydrocarbon storage facilities.</p> <p>Produced water does not meet the definition of crude or condensate; so 20.2.38 does not apply to the PW tanks WT1, WT2.</p> <p>The permittee complies with 2.38.112 NMAC by controlling emissions with a flare.</p>
2.61	Smoke and Visible Emissions	Yes	ENG1-9, ENG11-12, FL1-3, RB1-3, HTR1	This regulation that limits opacity to 20% applies to Stationary Combustion Equipment, such as engines, boilers, heaters, and flares unless your equipment is subject to another state regulation that limits particulate matter such as 20.2.19 NMAC (see 20.2.61.109 NMAC). The engines, flares, and re-boilers are stationary combustion equipment.
2.70	Operating Permits	Yes	Entire Facility	<p>The source is a Title V Major Source as defined at 20.2.70.7 NMAC and applicant will apply for a Title V Operating Permit.</p> <p>PTE is ≥ 100 TPY for NO_x, CO, and VOCs.</p> <p>PTE is ≥ 10 TPY Formaldehyde.</p>
2.71	Operating Permit Fees	Yes	Entire Facility	Source is subject to 20.2.70 NMAC as cited at 20.2.71.109 NMAC.
2.72	Construction Permits	Yes	Entire Facility	PER > 10 pph or 25 tpy for criteria pollutants, NO _x , and CO. Therefore, this facility is subject to 20.2.72 NMAC.
2.73	NOI & Emissions Inventory Requirements	Yes	Entire Facility	<p>Applicable to all facilities that require a permit.</p> <p>PER > 10 tpy for a regulated air contaminant.</p>

STATE REGU- LATIONS CITATION 20 NMAC	Title	Applies (Y/N)	Unit(s) or Facility	JUSTIFICATION:
2.74	Permits- Prevention of Significant Deterioration	No		<p>20.2.74.7.AG (1) This facility is NOT one of the listed Table 1-PSD Source Categories. (20.2.74.501 NMAC)</p> <p>20.2.74.7.AG (2) A stationary source not listed in Table 1 of this Part (20.2.74.501 NMAC) and which emits or has the potential to emit stack emissions of two hundred fifty (250) tons per year or more of any regulated pollutant; This facility does NOT have potential to emit 250 TPY or more of any regulated pollutant.</p>
2.75	Construction Permit Fees	Yes	Entire Facility	This facility is subject to 20.2.72 NMAC annual fees (until TV Operating Permit issuance)
2.77	New Source Performance	Yes	See Sources subject to 40 CFR 60	Applies to any stationary source constructing or modifying and which is subject to the requirements of 40 CFR Part 60. See discussion under Federal Regulations below.
2.78	Emissions Standards for HAPs	No		<p>This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 61.</p> <p>The facility does not fit into any of the source categories.</p>
2.79	Permits Nonattainment Areas	No		This facility is not located in, nor does it affect, a nonattainment area.
2.82	MACT Standards for Source Categories of HAPs	Yes	See sources subject to 40 CFR 63	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63. See discussion under Federal Regulations below.

12.0 Federal Regulatory Analysis:

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
Air Programs Subchapter C (40 CFR 50)	National Primary and Secondary Ambient Air Quality Standards	Yes	Entire Facility	Independent of permit applicability; applies to all sources of emissions for which there is a Federal Ambient Air Quality Standard.
NSPS Subpart A (40 CFR 60)	General Provisions	Yes	See sources subject to a	Applies if any other subpart applies.

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
			Subpart in 40 CFR 60	Subparts JJJJ and OOOOa apply.
40 CFR Part 60 Subpart JJJJ (Quad -J)	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	Yes	ENG1-3 & ENG11-12, TBD for ENG4-9	<p>The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (5) of section 60.4230. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.</p> <p>The construction date for the engines will be after the applicability date of June 12, 2006 in 60.4230 (a)(4).</p> <p>Units ENG1-ENG3 are 5,000 hp 4SLB engines constructed after 7/1/2010. Units ENG11-ENG12 are 1,380 hp 4 SLB engines constructed after 7/1/2010. Therefore, the units are subject at §60.4230(a)(4)(i) and are subject to the emission limitations in Table 1 per 40 CFR 60.4233(e).</p> <p><u>ENG4-9:</u> These units, when ordered, will be evaluated for applicability under subpart JJJJ.</p>
NSPS 40 CFR Part 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015	Yes	Compressors for ENG1-9 & ENG11-12, FUG	<p>1) <u>The oil and water storage tanks</u> will be constructed after the applicability date; however, the water tank emissions are < 6tpy uncontrolled, so do not fall under OOOOa.</p> <p><u>OT1-4 & SKT-1-2:</u> Emissions are controlled to < 6tpy by use of a flare with collection efficiency of 98%</p> <p>2) The facility uses low-bleed pneumatic controllers.</p> <p>3) <u>Compressors:</u> Per §60.5365a(c), the Compressors associated with engines (ENG1-9, ENG11-12) are subject to the control standards of §60.5385a.</p> <p>4) <u>Fugitives:</u> Under §60.5365a (j), the collection of fugitive emissions components at a compressor station, as</p>

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
				defined in §60.5430a, is an affected facility. The facility will be subject to leak monitoring from fugitive components, per §60.5397a.
MACT Subpart A (40 CFR 63)	General Provisions	Yes	See sources subject to a Subpart in 40 CFR 63	Applies if any other subpart applies. Subparts HH and ZZZZ apply. This facility is a major source of HAPS, emitting 20.5 TPY formaldehyde and 28.1 TPY Total HAPs.
40 CFR 63.760 Subpart HH	Oil and Natural Gas Production Facilities –	Yes	DEHY1-3	<p>The facility is a natural gas production field facility, located prior to the point of custody transfer, under definitions in 63.761. Therefore, the definition of Major Source in 63.761 provides that <u>only HAP emissions from glycol dehydration units and storage vessels shall be aggregated for a major source determination.</u></p> <p>AREA SOURCE (Minor for HAPs): given the definitions above, this facility is an area source <u>under HH.</u></p> <p>1) <u>EXEMPTIONS</u>: The facility contains affected sources (TEG glycol dehydrators, 63.760(b)(2)).</p> <p>However, being an Area Source, and actual benzene emissions from each individual unit is less than 0.90 megagrams per year (< 1 tpy), the dehydrators are exempt (63.764(e)(1)(ii)), and the facility is only required to maintain records of the determination as required in §63.774(d)(1).</p>
40 CFR 63 Subpart ZZZZ (Quad Z)	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)	Yes	ENG1-3 & ENG11-12, & TBD ENG4-9	<p>MAJOR SOURCE-As defined at 63.6585(b) and 63.6675, this facility is a major source of HAPs, emitting 20.5 TPY formaldehyde and 28.1 TPY Total HAPs.</p> <p>Per §63.6590(a)(2), Units ENG1-3 & ENG11-12 are subject:</p> <p><i>New stationary RICE.</i> (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.</p> <p>ENG4-9: These units, when ordered, will be</p>

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
				evaluated for applicability under subpart ZZZZ.

13.0 **Exempt and/or Insignificant Equipment that do not require monitoring:** No exempt equipment was identified in the application.

14.0 **New/Modified/Unique Conditions** (Format: Condition#: Explanation):

- A. Date of Monitoring Protocol used for IC Engines: December 11, 2019
- B. Date of Monitoring Protocol used for Tanks & Loading: September 19, 2017
- C. Date of Monitoring Protocol used for Glycol Dehydrators: February 12, 2018

15.0 **Permit specialist's notes to other NSR or Title V permitting staff concerning changes and updates to permit conditions.**

- A. A 40 CFR 64 Compliance Assurance Monitoring applicability analysis should be determined and, if appropriate, include the plan in the initial TV application for engines, dehydrators, and/or tanks.
- B. AQB does not recognize the fugitive control efficiency represented in the application. The "uncontrolled" fugitives are 21.3 tpy.